

3.2 SOLVING SYSTEMS BY SUBSTITUTION METHOD

Ex 1 $2x + 3y = 5$

$$x = 5y + 9$$

$$x = 5(-1) + 9$$

$$2(5y + 9) + 3y = 5$$

$$x = -5 + 9$$

$$10y + 18 + 3y = 5$$

$$x = 4$$

$$13y + 18 = 5$$
$$-18/-18$$

$$(4, -1)$$

$$13y = -13$$

$$y = -1$$

Ex 2 $-2x + y = 6$

$$y = 2x - 5$$

$$-2x + 2x - 5 = 6$$

$$-5 \neq 6$$

$$\emptyset$$

NO SOLUTION!

TRY

$$4x - 5y = -3$$

$$x = 2y - 3$$

Ex 3 $3x - y = 4$

$$y = 3x - 4$$

$$3x - (3x - 4) = 4$$

$$3x - 3x + 4 = 4$$

$$4 = 4$$

INFINITELY MANY SOLUTIONS

HOMEWORK: WORKSHEET 199 # 21-34